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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,507	01/09/2002	Achim Henkel	1913	9144

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EXAMINER

GONZALEZ, JULIO C

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/030,507

Applicant(s)

HENKEL ET AL.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims disclosed that the evaluation unit evaluates the voltages associated with the phase windings. The specifications are not clear enough as to how the voltages are evaluated? Is there a threshold voltage? Current limits? What determines the evaluation? How are the voltages used in the evaluation?

How the evaluation unit detects error functions of the rectifier? The phase windings? What is meant by an error "function"? A functionality of the device (e.g. rectifier)? Or an undesired output voltage?

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, what is meant by detecting "unauthorized work states"? What is considered an authorized work state? What makes the phase windings to have a state of unauthorized work?

In claims 4 and 5, what is meant by error functions? What is considered to be an error? How are the errors detected?

In order to advance prosecution in the merits, the Prior Art will be applied as best understood by the examiner.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schramm et al in view of Kohl et al (US 6,163,138) and Umeda et al.

Schramm et al discloses an apparatus for regulating the exciter current for a generator (see abstract), a voltage source 19, a rectifier connected to the voltage source 19, three phase windings 13a-c connected to the rectifier, an evaluation unit 23 connected to one phase winding 13 and the evaluation unit 23 is a component of the voltage regulator (see figure 1) and wherein the exciter winding 14 is controlled (see claim 1).

However, Schramm et al does not disclose explicitly that the evaluation unit has a fourth terminal.

On the other hand, Kohl et al discloses for the purpose of providing to an output voltage alternator high voltage strength even in the load dump situations, a regulator 11, an evaluation unit IS2, IS1 having a fourth input terminal UB+ which is connected to the positive pole of the voltage source 20 and the evaluation terminal has one terminal connected to a ground (see figure 1). Moreover, Kohl et al discloses that the frequency evaluation may be performed (column 3, lines 37-41) and controlling of the excitation (column 2, lines 49-54 & see claim 1). However, neither Schramm et al nor Kohl et al disclose explicitly having an evaluation unit with three terminal connected to three phase windings.

On the other hand, Umeda et al discloses for the purpose of reducing the vibration or noise by reducing the electromagnetic force pulsation in an AC power

generating apparatus, a regulator 71, exciter winding 4c, phase windings 5a-c having terminals Va-c and each of the phase winding terminals are connected to one input terminal of an evaluation unit 7 (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design an apparatus for regulating the exciter current as disclosed by Schramm et al and to modify the invention by grounding the evaluation unit for the purpose of providing to an output voltage alternator high voltage strength even in the load dump situations as disclosed by Kohl et al and to provide each winding terminal connected to an evaluation unit for the purpose of reducing the vibration or noise by reducing the electromagnetic force pulsation in an AC power generating apparatus as disclosed by Umeda et al.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schramm et al, Kohl et al and Umeda et al as applied to claim 1 above, and further in view of McClain et al.

The combined apparatus discloses all of the elements above. However, the combined apparatus does not disclose  
However, the combined apparatus does not disclose explicitly that an evaluation unit may detect errors in a rectifier.

On the other hand, McClain et al discloses for the purpose of improving feedback control system which provides true voltage regulation for AC loads that an evaluation unit may detect errors in a rectifier and windings (see column 4, lines 61-65; column 5, lines 15-20; column 8, lines 10-14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined apparatus as disclosed above and to modify the invention by detecting errors in a rectifier for the purpose of improving feedback control system which provides true voltage regulation for AC loads as disclosed by McClain et al.

*Conclusion*

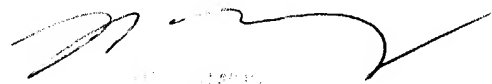
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

June 10, 2003



Handwritten signature of Julio C. Gonzalez, dated JUN 10 2003, with a stamp from the USPTO.